

Patent Abstracts of Japan

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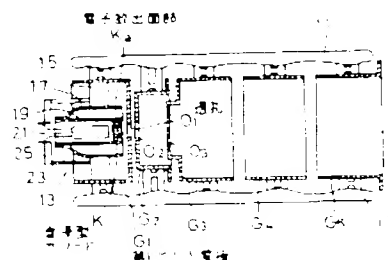
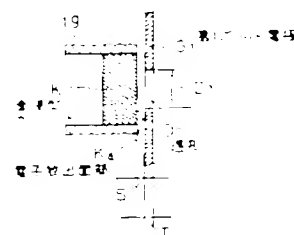
APPLICATION DATE : 24-10-84
APPLICATION NUMBER : 64036139

APPLICANT : SONY CORP.

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TITLE : ELECTRON GUN STRUCTURE



ABSTRACT : PURPOSE : To stably obtain an electron beam with high current density and enable changes in the cut-off voltage occurring with the passing of time to be reduced by adjusting the diameter of the electron beam-admitting hole of the first grid electrode, the thickness of the plate section of the first grid electrode and the distance between the electron-emitting surface and the plate section of the first grid electrode according to a specific formula.

CONSTRUCTION: An electron gun structure has an impregnated cathode (K) and a grid electrode group including a first grid electrode (G1) which has an electron-beam-admitting hole (O1) and a plate section facing the electron-emitting surface of the impregnated cathode (K). The diameter (D1) of the hole (O1) in the plate section of the first grid electrode (G1), the thickness (T1) of the above plate section and the distance (S1) between the electron-emitting surface of the impregnated cathode (K) and the plate section of the first grid electrode (G1) are adjusted according to the formula $0.055 \cdot D_1^2 \cdot T_1^2 \cdot S_1^2 \cdot T_1^2 \cdot S_1^2 \cdot 2.0$.

As a result, changes in the cathode cut-off voltage of the electron gun structure occurring with the passing of time are restricted to, for example, 5% or below.

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